

REMARKS

A substitute specification is enclosed. Reconsideration of this application, as amended, is respectfully requested.

The claims have been amended to overcome the 35 U.S.C. §112, second paragraph, rejections and to conform the claims with U.S. practice. The specification has also been amended to conform with standard practice.

Claims 15, 16, and 18-23 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Shimizu. Applicant respectfully traverses.

Shimizu (US 5,486,683) describes a cook plate of a special polyester material not made of glass or glass ceramic. In Shimizu (cf. col. 1, lines 47 to 60) the disadvantages of a ceramic plate are especially stressed. The practitioner of the art will therefore obtain no suggestion from Shimizu for using the shape of the plate according to Shimizu in a glass or glass ceramic plate.

Shimizu's cook plate of polyester material is made by injecting the material into a mold (cf. col. 6, lines 16-17). In the case of a glass or glass ceramic plate such a procedure is not possible in practice. therefore it is proposed in the present application to shape the edge protection by upsetting (cf. final paragraph of the description). The practitioner cannot learn edge protection by this method of edge protection from Shimizu, because the material used therein cannot be shaped by rolling and upsetting.

Reconsideration and withdrawal is respectfully requested.

Claims 15, 16, 18, 19 and 23 were rejected under 35 U.S.C. §102 (a) as allegedly anticipated by Gille. Applicant respectfully traverses.

Gille describes a glass ceramic plate with the margin bent downward. This plate does not have a thickened marginal area, i.e., no edge protection. There is no suggestion from Gille to provide a thickened edge as edge protection.

Reconsideration and withdrawal is respectfully requested.

Claims 15, 16 and 18-23 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Colvin. Applicant respectfully traverse.

Colvin (GB 2,099,137) describes not a glass or glass ceramic plate, but an enameled cast iron plate. In Colvin the disadvantages of ceramic plates are expressly emphasized (cf. page 1,

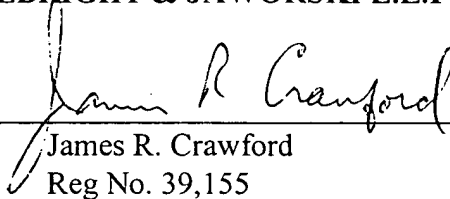
lines 5 to 11). There is no teaching or suggestion to provide Colvin's edges in a glass or glass ceramic plate, because these edges can be made from metal without difficulty using an appropriate mold. However, it is not so easy to prepare such a form with a glass or glass ceramic plate. The present inventor has discovered a way to do so, and is believed to be entitled to a U.S. patent for the claimed invention.

In view of the foregoing, it is readily seen that none of the cited references disclose each and every limitation of the claimed invention, and thus none of these anticipate the claims as allegedly by the Examiner. Accordingly, issuance of a notice of allowance is respectfully requested.

Respectfully submitted,

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**MARKED UP COPY OF CLAIMS**

15. (Amended) [Glass or glass ceramic] A plate for a kitchen appliance[, especially a cooking or baking surface, wherein] the plate [has] comprising at least one of glass or a glass ceramic and having an upper side and a lower side, the plate having a safe edge[, characterized in that the safe edge is] formed by a cross-sectional profiled portion thicker than the thickness of the plate, which merges integrally and seamlessly with the plate and is upset or shaped on the [rolled] plate.
16. (Amended) Glass or glass ceramic plate according to claim 15, wherein the profiled portion projects in at least one direction selected from the group consisting of above the upper side [and/or] and below the bottom side of the plate.
17. (Amended) Glass or glass ceramic plate according to claim 15, wherein at least one of the upper side [and/or] and the lower side of the plate is flat within the profiled portion.
20. (Amended) Glass or glass ceramic plate according to claim 15, wherein the profiled portion is rounded at [the] its edge.
23. (Amended) Glass or glass ceramic plate according to claim [15] 17, wherein the profiled portion is elevated by a height over the flat upper side of the plate such that a catchment for liquid is formed.
27. (Amended) [Method] A method for the manufacture of a glass or glass ceramic plate for a kitchen appliance, [which has] the plate having a safe edge, [characterized in that] comprising rolling the glass or ceramic plate in a green state [is first made by rolling] and then upsetting or shaping[,] the rolled plate while still in the green state [, is upset or shaped] such that there is a profiled portion thickened in relation to the thickness of the plate is formed, and heat treating or ceramicizing [that then] the rolled, upset or shaped plate having the profiled portion [is heat treated and/or ceramicized] to [reach its] form the finished [state] glass or ceramic plate.
28. (Amended) [Method] The method according to claim 27, wherein the plate is heated in the green state to reduce thermal stresses and additionally heated in its marginal area and upset or shaped by means of a forming tool to form the profiled [port] portion.



**Glass or Glass Ceramic Plate with a Safe Edge  
and Method for the Manufacture Thereof**

*BACKGROUND AND SUMMARY OF THE INVENTION*

The invention relates to a glass or glass ceramic plate for a kitchen appliance,

5 especially a cook top or bake surface which has a safe edge, and to a method for its manufacture.

In the state of the art, glass and glass ceramics are used in kitchen appliances. they are characterized by having a nonporous, hygienic and easily cleanable surface and lastingly withstand the temperature fluctuations that occur. Glass ceramic cook tops are widely used on account of their flat, easy-to-clean surface and their permeability to radiation. In bake ovens glass plates are used as baking dishes or as grease pans. In refrigerators glass plates are used as shelves.

The known glass and glass ceramic plates require safety edging in order to protect the sharp edges and/or to enable the plate to be held in a tension-free manner in the kitchen appliance and/or to reduce the risk of breakage. In the state of the art the glass or glass ceramic plates are therefore provided with a frame. Commonly used frames consist of enameled steel shapes, stainless steel shapes, aluminum shapes or plastic shapes which are glued or clamped on the plate. For the production of such frames special tools are necessary and fastening the frame to the plate involves considerable assembly work. This increases the cost of edge-protected glass or glass ceramic plates.

In ordinary frames a seam necessarily exists between the frame and the plate, with the result that between the safe edge and the plate critical areas exist which ultimately

of the kind referred to in the beginning, in which the safe edge is improved and simplified, especially in regard to lasting cleanliness. Another problem is to provide a method for the manufacture of the plate.

According to the invention the above problem regarding the plate is solved by the features of claim 1 and, with regard to the method of its manufacture, by the features of claim 13

It is thus brought about that there is no seam between the safe edge and the plate intended for bearing cooking or baking utensils or foods in containers. The cross-sectional profiled portion formed on the plate itself forms the safe edge, which on the one hand can eliminate the sharp edge from the outer margin of the plate, and on the other hand can also serve for the mounting or fastening of the plate, without thereby being exposed to such stresses as an additional frame would create. The ordinary frames of the state of the art are unnecessary. This reduces the cost of protecting the edges of a glass or glass ceramic plate.

Since there is no seam between the profiled portion and the plate, thorough cleaning is always possible. Since it consists of the same material as the plates, the safe edge formed by the profiled portion is just as non-porous as the plates.

Preferably, the profiled portion projects above the top and/or below the bottom of the plate. thus forming a catchment on the plate in which liquid escaping from cooking or baking utensils can collect. The bottom recess can serve to cover a sealing strip provided on the bottom surface or to assure a defined distance between the glass plate and anything under it. This can be advantageous if the plate serves as a slide-in shelf for a bake oven (cf.

Fig. 7) and to prevent scorching something (a kitchen tablecloth, for example) on which it is placed. In this case the glass surface will not come in contact with the tablecloth.

Preferably the outside edge of the guard is rounded. Such rounding avoids sharp corners, reduces sensitivity to impact and improves the stability of the plate.

Additional advantageous features of the invention will be found in the following description of embodiments. *(In the drawing: Brief Description of the Figures)*

Figure 1 is a fragmentary sectional view of a glass ceramic plate with a marginal profiled portion above the top and below the bottom thereof,

Figure 2 an alternative to Fig. 1 with a marginal profiled portion above the top thereof,

Figure 3 an alternative to Fig. 1 with a marginal profiled portion below the bottom thereof,

Figure 4 an alternative to Fig. 1 with flattened areas,

Figure 5 a perspective view of a glass ceramic plate with a thickened profiled portion around all four margins,

Figure 6 an alternative to Fig. 5, wherein the plate is rounded at the corners,

Figure 7 a glass plate with a thickened profiled portion on two opposite margins.

*Detailed Description*  
A glass plate 1 has a planar upper side 2, as a cook surface for example, and a plane-

parallel bottom 3 of a conventional thickness D. It can also be imagined, however, that the upper surface departs in some areas from the planar form in order to accommodate working elements or form functional areas. This applies especially to switch areas or gas burner lead-throughs or the like. At the margin 4 of the glass plate the safe edge is in the form of a

## Claims

*It is claimed*

1. Glass or glass ceramic plate for a kitchen appliance, especially a cooking or baking surface, wherein the plate has a safe edge, characterized in that the safe edge is formed by a cross-sectional profiled portion (5) thicker than the thickness (D) of the plate (1), which merges integrally and seamlessly with the plate (1) and is upset or shaped on the rolled plate (1).
2. Glass or glass ceramic plate according to claim 1, characterized in that the profiled portion (5) projects above the upper side (2) and/or below the bottom side (3) of the plate (1).
3. Glass or glass ceramic plate according to either of the foregoing claims, characterized in that the upper side (2) and/or the lower side (3) of the plate is flat within the profiled portion (5).
4. Glass or glass ceramic plate according to claim 1 or 2, characterized in that the upper side (2) differs in partial areas from a planar shape.
5. Glass or glass ceramic plate according to any one of the foregoing claims, characterized in that the profiled portion (5) is a holding zone for the mounting of the plate (1).